

REMARKSRequest for Correction/Amendment of Inventorship

Applicants are filing a Request for Correction/Amendment of Inventorship under 37 C.F.R. § 1.48(a), with associated documents, to add Stephen Titus as an inventor in this application. The error in omitting Mr. Titus as an inventor occurred without deceptive intention on the part of the applicant.

Amendment to Specification

The Specification has been amended to add a new paragraph at page 9, following line 24. This amendment specifies that, by way of example only, an optional outer coating of a wood, such as 0.005 inch maple veneer 46, can be adhesively joined to the outer surface of the shaft 12.

Support for this amendment can be found in U.S. Patent 6,110,051 (the '051 patent), issued to the present inventors, at col. 5, lines 30-32. The present application claims priority to the '051 patent, and the subject matter of the '051 patent was incorporated by reference into the parent application of the present application, U.S. 09/649,473, which was itself incorporated by reference into the present application. Thus, the subject matter of this paragraph was present in the present application as filed, and no new matter has been added.

Claim Amendments

Claims 1, 7 and 9 have been cancelled, and Claims 10-13 have been added. Claims 3 and 8 have been amended to update their dependencies.

New Claim 10 is independent, and recites a billiard cue that comprises a shaft having a tip end and an opposed end, the shaft formed of wood and a composite material including fibers disposed in a binder, the composite material forming a cylindrical wall defining a bore, the bore extending from the tip end of the shaft towards the opposed end of the shaft, the cylindrical wall having a wall thickness of less than 0.050 inches along the length of the bore.

Support for the new claims can be found in the Specification at, for example, page 4, lines 28-31, page 5, lines 7-11, page 7, lines 20-25, and the amended paragraph at page 9, following line 24.

Claim Rejections

In the Office Action dated October 10, 2006, Claims 1, 3, 7, 8 and 9 were rejected under 35 U.S.C. § 102(b) as being anticipated or, in the alternative, under 35 U.S.C. § 103(a) as being obvious over U.S. 5,725,437 to McCarty *et al.* ("McCarty '437").

As previously discussed, Claims 1, 7 and 9 have been cancelled, and new Claims 10-13 have been added. For the following reasons, it is respectfully submitted that the claim rejections are all overcome, and that the present application is allowable.

The present claim rejections are inapplicable to the pending claims, because the cited McCarty '437 patent is not prior art with respect to these claims. The pending claims are fully supported by the disclosure of U.S. 6,110,051, to McCarty *et al.* ("McCarty '051") to which the present application claims priority. Support for newly-added independent Claim 10 can be found in McCarty '051 at, for example, col. 3, lines 4-10, col. 4, lines 31-32, and col. 5, lines 30-32.

The McCarty '051 patent was filed on November 25, 1998 as U.S. Application No. 09/200,244. The inventors of the '051 patent are Allan McCarty and Steve Titus. Thus, the effective filing date of the present claims is at the very latest November 25, 1998.

The cited McCarty '437 patent was issued on March 10, 1998, which is less than one year prior to the November 25, 1998 effective filing date of the present claims. Therefore, the McCarty '437 patent is not a valid reference under § 102(b), and the § 102(b) anticipation rejections are not applicable to the pending claims.

Furthermore, the inventors of the present application, Allan McCarty and Stephen Titus, filed U.S. Provisional Application 60/066,589 on November 25, 1997, a copy of which is attached hereto as Exhibit A.¹ This provisional application also supports the presently-pending claims, and demonstrates that the inventors had conceived and constructively reduced to practice the subject matter of the present claims by at least November 25, 1997, which is prior to the issue date of the cited McCarty '437 patent. Thus, it is submitted that the McCarty '437 patent is not valid prior art against the pending claims under any subsection of 35 U.S.C. § 102, and therefore could not be applied in an obviousness rejection under 35 U.S.C. § 103.

¹ The first paragraph of the specification of the McCarty '051 patent references and claims the benefit of this provisional application, properly identifying the provisional application by its filing date, inventors and title, but erroneously transposing the final three digits of the Serial Number (60/066,895 instead of 60/066,589). Applicants believe this is an obvious typographical error that does not affect the validity of the priority claim, and intend to correct this error on the McCarty '051 patent.

In view of the above, it is respectfully submitted that the claim rejections are traversed, and it is requested that the application be allowed.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

By Kevin T. Shaughnessy

Kevin T. Shaughnessy

Registration No. 51,014

Telephone: (978) 341-0036

Facsimile: (978) 341-0136

Concord, MA 01742-9133

Date: 3/2/07

69169 U.S. PTO
60/066589



11/26/97

Class

Subclass

ISSUE CLASSIFICATION

SCANNED 2

PROVISIONAL
APPLICATION
NUMBER

SERIAL NUMBER
60/066,589
PROVISIONAL

FILING DATE
11/26/97

CLASS

SUBCLASS

GROUP ART UNIT

EXAMINER

APPLICANTS
ALLAN MCCARTY, JACKSONVILLE, FL; STEVE TITUS, ANN ARBOR, MI.

CONTINUING DATA***
VERIFIED

FOREIGN APPLICATIONS***
VERIFIED

FOREIGN FILING LICENSE GRANTED 03/14/98

Foreign priority claimed
35 USC 119 conditions met

☐ yes ☐ no
☐ yes ☐ no

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CLAIMS

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Examiner's Initials

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PAR-115-A

ADDRESS

WILLIAM M HANLON, JR.
YOUNG & BASILE
3001 WEST BIG BEAVER ROAD
SUITE 624
TROY MI 48064

TITLE

BILLIARD CUE

U.S. DEPT. OF COMM./ PAT. & TM—PTO-438L (Rev.12-94)

Form PTO-1625
(Rev. 5/95)

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EXHIBIT

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69169 U.S. PTO

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PATENT APPLICATION



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INITIALS

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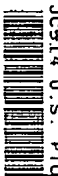
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PATENT APPLICATION SERIAL NO. _____

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
FEE RECORD SHEET

02/05/1998 H60R20W 00000032 60066589
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PROVISIONAL APPLICATION FOR PATENT COVER SHEET

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53 (b)(2).

A/prov

INVENTOR(S)					
Given Name (first and middle (if any))		Family Name or Surname		Residence (City and either State or Foreign Country)	
Allan		McCARTY		Jacksonville, Florida	
Steve		TITUS		Ann Arbor, Michigan	
<input type="checkbox"/> Additional inventors are being named on the _____ separately numbered sheets attached hereto					
TITLE OF THE INVENTION (280 characters max)					
BILLIARD CUE					
Direct all correspondence to: CORRESPONDENCE ADDRESS					
<input type="checkbox"/> Customer Number		<input type="text"/>		<div style="border: 1px solid black; padding: 5px;">Place Customer Number Bar Code Label here</div>	
OR Type Customer Number here					
<input checked="" type="checkbox"/> Firm or Individual Name		William M. Hanlon, Jr. YOUNG & BASILE, PC			
Address		3001 West Big Beaver Road			
Address		Suite 624			
City	Troy	State	MI	ZIP	48084
Country	US	Telephone	248-649-3333	Fax	248-649-3338
ENCLOSED APPLICATION PARTS (check all that apply)					
<input checked="" type="checkbox"/> Specification Number of Pages		<input type="text"/> 13		<input type="checkbox"/> Small Entity Statement	
<input checked="" type="checkbox"/> Drawing(s) Number of Sheets		<input type="text"/> 3		<input checked="" type="checkbox"/> Other (specify) Power of Attorney	
METHOD OF PAYMENT OF FILING FEES FOR THIS PROVISIONAL APPLICATION FOR PATENT (check one)					
<input checked="" type="checkbox"/> A check or money order is enclosed to cover the filing fees		FILING FEE AMOUNT (\$)			
<input type="checkbox"/> The Commissioner is hereby authorized to accept credit any overpayment to Deposit Account Number:		<input type="text"/> 25-0115		<input type="text"/> \$150.00	
The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.					
<input checked="" type="checkbox"/> No.					
<input type="checkbox"/> Yes, the name of the U.S. Government agency and the Government contract number are:					

Respectfully submitted

SIGNATURE

Date 11/26/97

TYPED or PRINTED NAME William M. Hanlon, Jr. REGISTRATION NO. 28422

TELEPHONE 248-649-3333

(if appropriate)

Docket Number:

PAR-115-A

USE ONLY FOR FILING A PROVISIONAL APPLICATION FOR PATENT

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Box Provisional Application, Assistant Commissioner for Patents, Washington, DC 20231.

THOMAS N. YOUNG
ANDREW R. BASILE
WILLIAM M. HANLON, JR.
MARSHALL G. MACFARLANE
DONALD L. WOOD
THOMAS D. HELMHOLDT
JASON J. YOUNG
TODD L. MOORE
DAVID B. EHRLINGER
KATHLEEN G. MELLON
DENISE M. GLASSMEYER
JULIA CHURCH DIERKER
DARLENE P. CONORA
CHRISTOPHER A. MITCHELL
MOLLY BASILE MARKLEY
CHRISTIAN J. GARASCIA
THOMAS E. BEJIN *

PATENT AGENTS
GARY A. SMITH
PETE N. KIOUSIS

LAW OFFICES
YOUNG & BASILE, P.C.

YOUNG, BASILE, HANLON,
MACFARLANE, WOOD & HELMHOLDT, P.C.

PATENTS, TRADEMARKS AND COPYRIGHTS
3001 WEST BIG BEAVER ROAD

SUITE 624
TROY, MICHIGAN 48064-3107

TELEPHONE (248) 649-3333
FACSIMILE (248) 649-3338

November 26, 1997

2001 COMMONWEALTH BLVD.
SUITE 301

ANN ARBOR, MI 48105-1562
TELEPHONE (313) 662-1000
FACSIMILE (313) 662-1000

700 HARRIS BUILDING
JACKSON, MI 49201
TELEPHONE (517) 787-7878
FACSIMILE (517) 787-7878

DUNCAN F. BEAMAN, MICHIGAN
TOWNSEND F. BEAMAN, MICHIGAN

MT. CLEMENS
(810) 469-1141

GRAND RAPIDS
(616) 942-2324

* ALSO LICENSED IN MINNESOTA

Attorney's Docket: PAR-115-A

EXPRESS MAIL LABEL NO.:

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Assistant Commissioner of Patents
Washington, D.C. 20231

Sir:

Enclosed please find an application for U.S. Patent as
identified below.

Inventor: Allan McCarty and Steve Titus

Invention: BILLIARD CUE

and including: Postcard; Provisional Application Cover
Sheet; 13 pages of specification and 3 sheet of informal
drawings; and Power of Attorney.

Filing Fee: \$150.00

Please charge any deficiency or credit any excess in
the enclosed fees to Deposit Account No. 25-0115.

Respectfully submitted,

YOUNG, BASILE, HANLON, MacFARLANE, WOOD
& HELMHOLDT, P.C.

William M. Hanlon, Jr.
William M. Hanlon, Jr.
Attorney for Applicant(s)
Registration No. 28422

WMH/jao

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Our Reference: PAR-115-A

PATENT

BILLIARD CUE

BACKGROUND OF THE INVENTION

Field of the Invention:

5 The present invention relates, in general, to
billiard cues and, more specifically, to billiard cue
shafts.

Description of the Art:

10 Billiard or pool cues typically are formed of
an elongated shaft; a butt at one end of the shaft and a
ferrule mounted at an opposite end which supports a tip.
The shaft may be formed as a solid, one-piece member or
of two threadingly engageable sections. Typically, the
shaft has been formed of a hard wood, such as a hard
15 maple.

 Other materials, such as aluminum, steel,
plastic and carbon fiber, have also used to form
billiard/pool cue shafts. Cues formed of such "non-wood"
materials have been engineered to approximate wood in
20 weight and stiffness or rigidity; however none have
proven to play better than a hard wood cue.

 It is also known to form cue shafts of solid
maple with a thin composite outer skin formed of various
fibers and/or resin combinations. It is known to form a
25 cue shaft of a solid glass bonded fiber as shown in U.S.
Patent No. 3,103,359. It is also known to form a cue
shaft as a composite tube of carbon fibers in which the
shaft has a wall thickness of 0.060 inches or more and
the hollow interior of the shaft is filled with foam as
30 shown in U.S. Patent No. 4,816,203. U.S. Patent No.
5,112,046 discloses a shaft formed of a solid epoxy resin
body with a central graphite core. This shaft
accommodates flexure and impact by utilizing elongated
carbon filaments circumferentially spaced apart and
35 concentrically disposed about the core and extending
axially through the front and rear sections of the shaft.

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Generally a billiard or pool cue is formed with one of two styles of taper. In an "American" taper, the cue has a constant diameter of approximately 0.5 inches for approximately the first twelve inches from the tip end, this being the longest bridge length commonly used in play. The other common type of taper is a so-called "European taper". In this style of cue, the cue has a truncated cone shape along its entire length tapering to a tip.

Previously devised ferrules have been formed of ivory which is substantially harder than that of the material used to form the shaft. More recently, reinforced phenolics and thermoplastics have been employed to form ferrules. Such ferrules have a modulus of elasticity ranging from a high of 1.3×10^6 psi to a low of 0.35×10^6 psi as compared to the 1.8×10^6 psi modulus of elasticity of hard maple commonly used to form the shaft. The ferrule is adhesively joined to and/or press fit to one end of the shaft, typically by means of a tenon in the form of a narrow diameter end portion which projects out of the end of the shaft into a hollow bore extending inward from one end of the ferrule or, alternately, from the ferrule into a bore in one end of the shaft.

The tip, which is typically formed of leather, is adhesively joined to the ferrule. Generally, the tip, according to popular practice, is formed with a large radius to present a generally flat ball contacting end portion.

In use, the shaft is lined up with the intended path of movement of the cue ball prior to stroking the shaft to impact the tip on the ball. The cue can also be lined up to strike the cue ball off center, that is, to the left or right of the center of the ball, or above or below the center of the ball, to impart spin, draw or follow to the cue ball to cause it to move in a desired direction after it strikes another ball or a rail.

5 angle to the line of stroke of the cue. This so-called
angle of deflection varies with the speed of the stroke
and how far from center the cue tip strikes the cue
ball, but with a given off center distance and speed, the
magnitude of the angle of deflection is primarily a
10 function of the cue itself.

15 inside edge of the shaft closest to the center of the
ball. This buckling is then followed by an outward
flexing of the tip, ferrule and shaft end.
Experimentation by the Applicants has shown that a large
amount of buckling results in a larger and more
20 undesirable deflection of the cue ball from a path of
movement parallel to the cue stroke line than when
buckling is minimized and the end of the cue more easily
flexes or bends outward from the center of the cue ball
after impact with the cue ball. Applicants have also
25 found that a substantial amount of the cue ball
deflection is due to the mass of the shaft at the tip end
of the shaft.

Thus, it would be desirable to provide a billiard cue which has a significantly reduced mass at the tip end of the shaft while maintaining sufficient stiffness to minimize flexure or buckling of the tip end of the shaft and thereby deflection of a ball struck by the cue. It would also be desirable to provide a billiard cue formed of a material having high strength and stiffness; while at the same time providing a light weight and low mass at at least the tip end of the shaft. It would also be desirable to provide a billiard cue

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The billiard cue of the present invention is constructed to provide a significantly reduced mass at the tip end of the shaft; while maintaining the stiffness of the shaft equal to or greater than a conventional shaft made of hard maple. The reduced mass is achieved by forming a hollow bore in the shaft extending for at least a predetermined distance from the first end of the

shaft and a thin wall thickness at the first end of the shaft. This lower mass at the tip end of the shaft and high stiffness reduces flexure or buckling of the tip end of the cue shaft when the shaft is impacted with a ball thereby significantly reducing the deflection of the struck ball from its intended path of movement generally parallel to the stroke axis of the cue shaft. However, the unique combination of stiffness and lightweight characteristics maintains the cue tip on the ball while allowing deflection of the tip as the ball begins to rotate

BRIEF DESCRIPTION OF THE DRAWING

The various features, advantages and other uses of the present invention will become more apparent by referring to the following detailed description and drawing in which:

Fig. 1 is a side elevational view of a billiard cue constructed in accordance of the teachings of the present invention;

Fig. 2 is an enlarged, cross-sectional view generally taken along line 2-2 in Fig. 1;

Fig. 3 is an enlarged cross-sectional view of the tip, ferrule and tip end of the shaft of the cue shown in Fig. 1; and

Figs. 4A and 4B are pictorial representations depicting the impact of a conventional cue and the cue of the present invention with a ball.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to the drawing, and to Figs. 1 and 2 in particular, there is depicted a billiard/pool cue 10 constructed in accordance with the teachings of the present invention. The cue 10 has a unique shaft which has reduced mass at the tip end to lessen buckling of the tip end of the shaft which results in a truer tracking of the ball along its intended path of movement with less deflection.

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As shown in Figs. 1-3, the cue 10 includes a shaft 12, a butt end 14, a ferrule 16 and a tip 18. The shaft 12 may be formed of a single elongated member or two short members which are coaxially joined together.

The shaft 12 has a first end 20 on which the ferrule 16 is mounted, as described hereinafter and an opposed second end 22 to which the butt 14 is mounted in a conventional manner. A bore 24 extends through the shaft 12 at least for a predetermined distance, such as five to fifteen inches, from the first end 20 and, preferably, for the entire length of the shaft 12 between the first and second ends 20 and 22. Although an exterior surface 26 of the shaft 12 may be formed with either American or European tapers, the inner diameter or I.D. of the bore 24 preferably remains constant along its entire length. By way of example, the bore 24 has a preferred inner diameter of about 0.440 inches.

In an exemplary "American taper" shaft 12, the wall thickness of the shaft 12 from the first end 22 in intermediate point denoted by reference numeral 28 which is approximately 14-15 inches from the first end 20, is at a constant 0.030 inches. In the "American taper" the O.D. of the shaft 12 between the first end 20 and the intermediate point 28 also remains constant.

From the intermediate point 28 to the second end 22, the exterior surface 26 of the shaft 12 tapers outwardly in a smooth, concave shape to another point 30 spaced from the second end 22 wherein it makes a convex transition to a generally straight taper of approximately 0.015 inches per inch to the second end 22.

From the intermediate point 28 to the second end 22, the wall thickness of the shaft 12 increases to approximately 0.04 inches and more as the O.D. of the shaft 12 increases toward the second end 22.

The shaft 12 is preferably formed of a composite material, such as graphite epoxy or fiber reinforced plastics, which are typically many times

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stronger per unit weight than hard maple. For example, graphite or carbon fibers imbedded in an epoxy resin binder may have a modulus of elasticity of greater than 4.3×10^6 psi for a 0.5 inch O.D. tip end shaft and the above-described wall thickness of 0.030 to 0.040 inches. Generally, the graphite or carbon fibers, which may also include glass fibers, extend linearly along the length of the shaft 12 between the first and second ends 20 and 22. The density of the fibers changes the modulus elasticity of the shaft 12. Thus, in an exemplary embodiment, the shaft 12 is formed of linearly extending fibers and a binder having a modulus elasticity of at least as great as 4.3×10^6 psi and a thin wall thickness, at least at the tip end 20 of the shaft 12 of about 0.030 inches in diameter. Other binder materials, such as polyester, etc. may also be employed. Thus, glass fiber/epoxy or glass fiber/polyester composites may also be employed to form the shaft 12.

The shaft 12 formed of these materials and having the desired modulus of elasticity and the thin wall cross-section has specified above an 80% decrease in mass toward the tip end 20 of the shaft 12 as compared to a similar size maple cue. This, coupled with the radius of the tip 18 and the compressible material of the ferrule 16, as described in Applicant's co-pending application, Serial No. 08/314,864, the contents in which are incorporated herein by reference, decreases the peak force taken by the shaft 12 upon impact with a ball to lessen buckling of the tip end 20 of the shaft 12. The decreased mass at the tip end 20 of the shaft 12 decreases the lateral force transmitted to the cue ball due to the necessary lateral acceleration of the tip 20 of the shaft 12.

At the same time, the reduced mass and increased tip acceleration of the shaft 12 also preserves approximately 94% of the stiffness of the shaft. This minimizes flexure of the tip end 20 of the shaft 12 and

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decreases deflection of the cue ball from its intended path of movement.

For completeness, a brief description of ferrule 16 and tip 18 will be provided herein. However, further details concerning the construction of the ferrule 16 and the tip 18 may be found by referring to the above-referenced and incorporated co-pending application.

The ferrule 16, as shown in Fig. 3, has a generally cylindrical shape with either straight side walls or a slight taper between a first end 30 and a second end 32. The second end 32 may be generally planar or formed with a concave recess as shown by example only in Fig. 3. The ferrule 16 may be formed with a variety of materials, such as nylon, ABS, urethane, etc., as long as the ferrule 16 has greater compression in the longitudinal direction than the compressibility of a material used to form the shaft 12.

Various mounting arrangements may be employed to mount or attach the ferrule 16 to the first end 20 of the shaft 12. As shown in Fig. 3, in one exemplary mounting arrangement, an annular shoulder 40 is spaced from the first end 20 of the shaft 12 and receives a second end 32 of the ferrule 16. The side wall of the ferrule 16 is notched so as to seat against the first end 20 of the shaft 12.

The shaft 12 is further notched as shown by reference number 42 to form an annular recess extending from the first end 20. A support member 44, such as an annular band of radially extending glass or carbon fibers, is wrapped around the end of the shaft 12 in the recess to increase the strength of the ferrule 16 mount to fully retain the ferrule 16 in the shaft 12.

By way of example only, an optional outer coating of a wood, such as 0.005 inch maple veneer 46, is adhesively joined to the outer surface of the shaft 12.

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The tip 18 is formed of a conventional material and is typically mounted by means of an adhesive to the first end 30 of the ferrule 16. Optionally, a resilient pad, not shown, may be interposed between the tip 18 and the first end 30 of the ferrule 16.

The advantages of the cue 10 of the present invention may be more clearly understood by reference to Figs. 4A and 4B which respectively show the action of a conventional shaft 52 and a shaft 14, ferrule 16 and tip 18 of the present invention on impact with a ball 74. The conventional shaft 52, shown in Fig. 4A, is formed of hard maple. Impact forces generated during an off-center impact of the shaft 52 with a ball 54 causes the tip end of the shaft 52 to buckle inward along the inside edge of the shaft 52 pushing the shaft 52 laterally outward at increasingly larger angles A, B and C. This results in deflection of the ball 54 along path 56 which is not parallel to the stroke axis of the shaft 52.

Fig. 4B depicts the action of the tip end of the cue 10 of the present invention during impact with the ball 54. Due to the high stiffness and light weight of the tip end of the cue 10, deflection of the tip end of the shaft 12, as shown in Fig. 2B, is minimized. However, the cue 10 exhibits easy radially outward flexure, to the positions shown in phantom in Fig. 4B during impact with the ball 74, which results in less deflection of the ball 74 from a line parallel to the line of movement or stroke axis of the shaft 14. The successive angles A', B' and C' are smaller than the angles A, B, C, respectively, in Fig. 4A. The combination of light tip end weight and high stiffness enables the tip 18 of the cue 10 to remain in contact with the ball 54 without added deflection as the ball begins to rotate. As a result, the ball 54 travels along path 58 which is more closely aligned or parallel with the stroke axis of the cue 10.

In summary, there has been disclosed a unique billiard cue having a unique shaft construction which minimizes buckling of the tip end of the shaft and significantly reduces the amount of deflection of a cue ball struck by the shaft from an intended path of movement generally parallel to the longitudinal stroke axis of the shaft. The shaft is formed of a composite material constructed of fibers in a binder which has a modulus of elasticity greater than or equal to 4.3×10^6 psi. A hollow bore extends through the shaft at least for a predetermined distance, such as at least five to fifteen inches from the first end of the shaft, to form a thin outer wall in the shaft. The outer wall has a thickness of about 0.030 inches extending from the tip end to a transition point located intermediately along the shaft wherein the wall thickness increases to about 0.040 inches in a gradual taper extending toward the second end of the shaft.

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What is claimed:

- 1 1. A billiard cue comprising:
2 a shaft having a wall with an outer surface and
3 first and second ends, a hollow bore extending from the
4 first end for at least a predetermined distance along the
5 length of the shaft toward the second end;
6 the shaft having a wall thickness of about
7 0.030 to 0.050 inches between the first and second ends;
8 and
9 the shaft formed of fibers disposed in a
10 binder.
- 1 2. The billiard cue of claim 1 wherein the
2 wall thickness is less than or equal to 0.04 inches.
- 1 3. The billiard cue of claim 1 wherein the
2 wall thickness is 0.03 inches from the first end to an
3 intermediate point along the length of the shaft.
- 1 4. The billiard cue of claim 3 wherein the
2 intermediate point is located from about 5 to about 15
3 inches from the first end of the shaft.
- 1 5. The billiard cue of claim 1 wherein the
2 fibers are carbon fibers disposed in an epoxy resin
3 binder.
- 1 6. The billiard cue of claim 1 wherein the
2 shaft is formed of a material having a modulus of
3 elasticity greater than or equal to 4.3×10^6 psi.
- 1 7. The billiard cue of claim 6 wherein the
2 modulus of elasticity of the shaft is about 4.3×10^6
3 psi.

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1 8. A billiard cue comprising:
2 a shaft having a wall with an outer surface and
3 first and second ends, a hollow bore extending from the
4 first end for at least a predetermined distance along the
5 length of the shaft toward the second end;
6 a shaft having a wall thickness of about 0.030
7 inches; and
8 the shaft formed of a material having a modulus
9 of elasticity greater than or equal to 4.3×10^6 psi.

1 9. The billiard cue of claim 8 wherein the
2 shaft is formed of carbon fibers disposed in an epoxy
3 resin binder.

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ABSTRACT OF THE DISCLOSURE

A billiard cue includes a shaft having a hollow bore extending from at least a predetermined distance from a first end toward a second end. The bore forms an outer wall in the shaft having a thickness between about 0.03 and 0.05 inches. The shaft is preferably formed of a composite material consisting of fibers in a binder, such as carbon fibers in an epoxy resin. The shaft material has a modulus of elasticity of at least 4.3×10^6 psi. The bore extending from the first end of the shaft, the thin wall thickness of the shaft adjacent to the first end and the material forming the shaft combine to decrease the mass of the tip end of the shaft while maintaining substantially all of the stiffness of a conventional shaft formed of a hard maple to minimize buckling of the tip end of the shaft and thereby substantially decrease deflection of the cue ball from its intended path of movement along a path parallel to the stroke axis of the shaft.

RECEIVED 11/25/57

POWER OF ATTORNEY


We, Allan McCarty and Steve Titus, declare that we are citizens of the United States, both residing at 5055-A St. Augustine Rd, Jacksonville, Florida 32207, and 1210 Arlington, Ann Arbor, Michigan 48104, respectively; and we believe we are the original, first and joint inventors of the invention in:

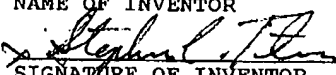
BILLIARD CUE

described and claimed in an about to be filed provisional application under 35 U.S.C. 111(b), my attorney's docket number PTR-115-A.

We hereby appoint Thomas N. Young, Patent Office Registration No. 20985, Andrew R. Basile, Patent Office Registration No. 24753, William M. Hanlon, Jr., Patent Office Registration No. 28422, Marshall G. MacFarlane, Patent Office Registration No. 30403, Donald L. Wood, Patent Office Registration No. 20014 and Thomas D. Helmholtz, Patent Office Registration No. 33181, as our attorneys, to prosecute this application and to transact all business in the United States Patent and Trademark Office.

Send all correspondence to Young & Basile, P.C., 3001 West Big Beaver Road, Suite 624, Troy Michigan 48064, Telephone: (248) 649-3333.

Allan McCarty
NAME OF INVENTOR

SIGNATURE OF INVENTOR

Steve Titus
NAME OF INVENTOR

SIGNATURE OF INVENTOR

Same as above
POST OFFICE ADDRESS

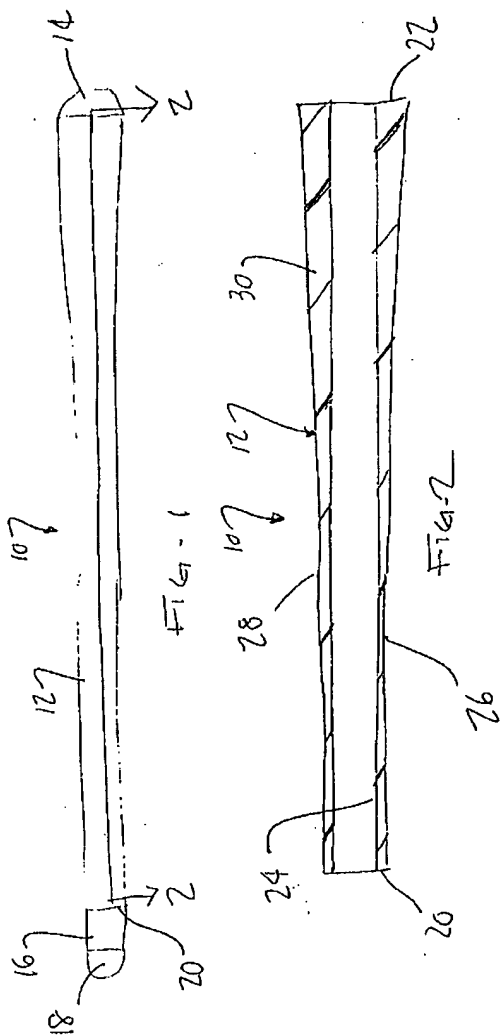
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PAGE 115A
2/3

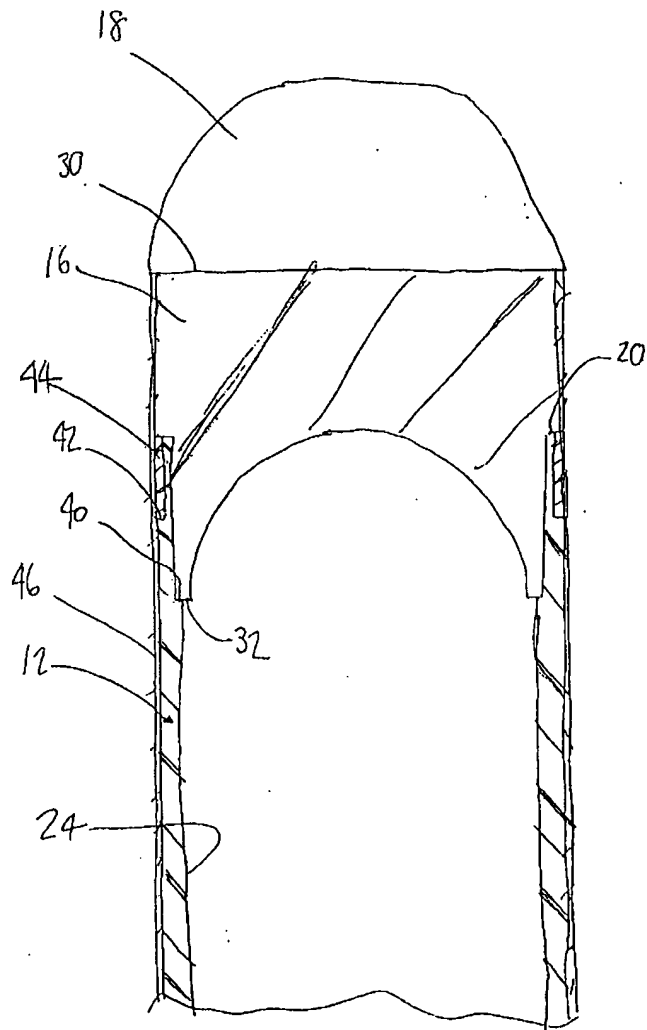


FIG 3

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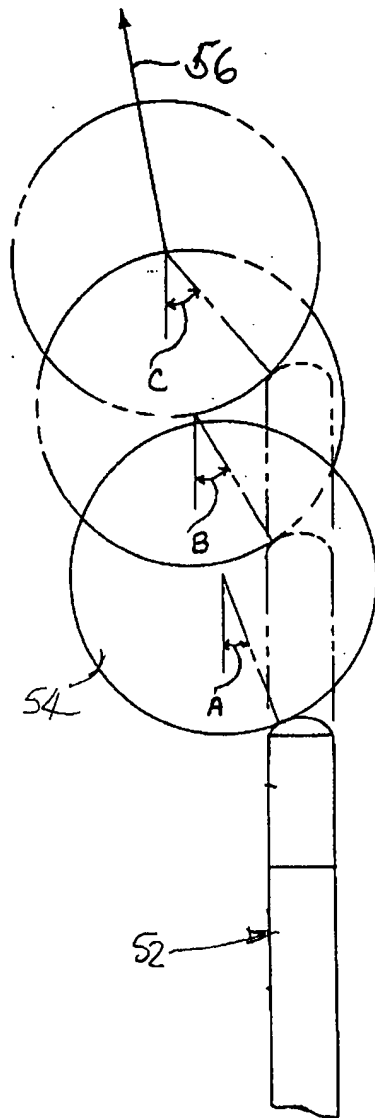


FIG 4A

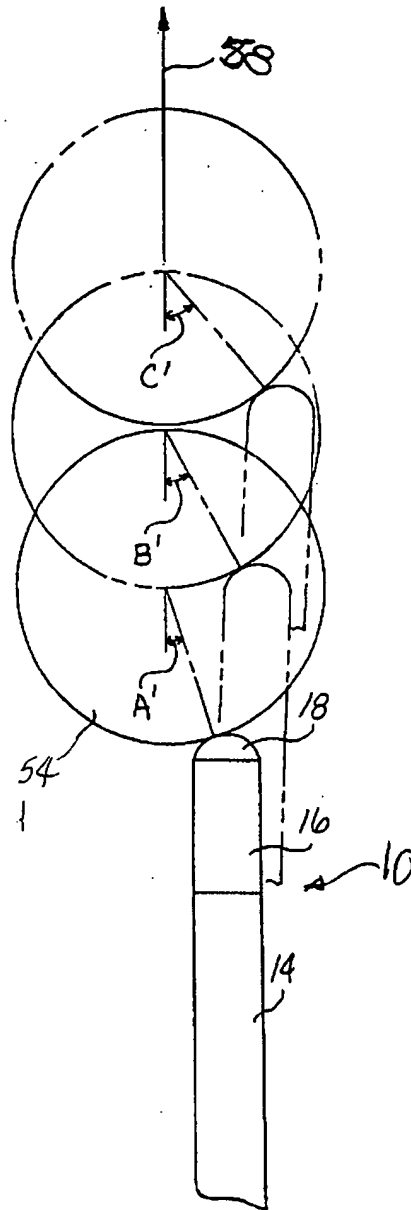


FIG 4B



Receipt

Our Reference: PAR-115-A

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

#2

Applicant: Allan McCarty, Steve Titus
Serial Number: 60/066,589
Filing Date: November 26, 1997
Title: BILLIARD CUE

REQUEST FOR CORRECTED FILING RECEIPT

Assistant Commissioner of Patents
Washington, D.C. 20231
ATTENTION: Box Provisional Application

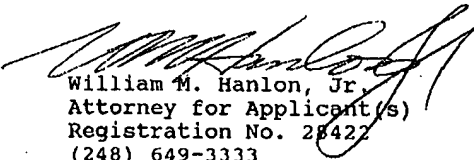
Sir:

Correction of the first listed inventors' name, Allan McCarty, to the correct spelling listed above and shown on the attached copy of the original Inventor Declaration filed with the subject application is respectfully requested.

Issuance of a new filing Receipt with the corrected first listed inventor's name is respectfully requested.

Respectfully submitted,

YOUNG, BASILE, HANLON,
MacFARLANE, WOOD & HELMHOLDT,
P.C.


William M. Hanlon, Jr.
Attorney for Applicant(s)
Registration No. 28422
(248) 649-3333

3001 West Big Beaver Rd., Suite 624
Troy, Michigan 48084-3107

Dated: March 31, 1998
WMH/jao



Our Reference: PAR-115-A

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Allan McCarty, Steve Titus
Serial Number: 60/066,589
Filing Date: November 26, 1997
Title: BILLIARD CUE

CERTIFICATE OF MAILING AND TRANSMITTAL LETTER

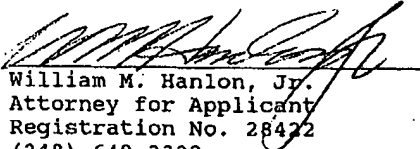
Assistant Commissioner of Patents
Washington, D.C. 20231
BOX PROVISIONAL APPLICATION

Sir:

Transmitted with this document is a Postcard; Request for Corrected Filing Receipt; Copy of Power of Attorney; and Copy of Filing Receipt in the above-identified application.

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William M. Hanlon, Jr.
Attorney for Applicant
Registration No. 28472
(248) 649-3333

YOUNG & BASILE, P.C.
3001 West Big Beaver Road
Suite 624
Troy, MI 48084-3107



POWER OF ATTORNEY

We, Allan McCarty and Steve Titus, declare that we are citizens of the United States, both residing at 5055-A St. Augustine Rd, Jacksonville, Florida 32207, and 1210 Arlington, Ann Arbor, Michigan 48104, respectively; and we believe we are the original, first and joint inventors of the invention in:

BILLIARD CUE

described and claimed in an about to be filed provisional application under 35 U.S.C. 111(b), my attorney's docket number PTR-115-A.

We hereby appoint Thomas N. Young, Patent Office Registration No. 20985, Andrew R. Basile, Patent Office Registration No. 24753, William M. Hanlon, Jr., Patent Office Registration No. 28422, Marshall G. MacFarlane, Patent Office Registration No. 30403, Donald L. Wood, Patent Office Registration No. 20014 and Thomas D. Helmholdt, Patent Office Registration No. 33181, as our attorneys, to prosecute this application and to transact all business in the United States Patent and Trademark Office.

Send all correspondence to Young & Basile, P.C., 3001 West Big Beaver Road, Suite 624, Troy Michigan 48084, Telephone: (248) 649-3333.

Allan McCarty
NAME OF INVENTOR
Allan McCarty
SIGNATURE OF INVENTOR

Steve Titus
NAME OF INVENTOR
Stephen Titus
SIGNATURE OF INVENTOR

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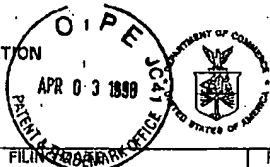
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PROVISIONAL APPLICATION
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APPLICATION NUMBER	FILING DATE	FIL FEE REC'D	ATTORNEY DOCKET NO.	DRWGS
60/066,589	11/26/97	\$150.00	PAR-115-A	3

WILLIAM M HANLON, JR.
YOUNG & BASILE
3001 WEST BIG BEAVER ROAD
SUITE 624
TROY MI 48084

Receipt is acknowledged of this Provisional Application. This Provisional Application will not be examined for patentability. Be sure to provide the PROVISIONAL APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to Box Provisional Application within 10 days of receipt. Please provide a copy of the Provisional Application Filing Receipt with the changes noted thereon. This Provisional Application will automatically be abandoned twelve (12) months after its filing date and will not be subject to revival to restore it to pending status beyond a date which is after twelve (12) months from its filing date.

Applicant(s) ALLAN MCARTY, JACKSONVILLE, FL; STEVE TITUS, ANN ARBOR,
MI. *McCarthy*

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TITLE
BILLIARD CUE

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KTS/BRH/eej
10/25/06

PATENT APPLICATION
Attorney's Docket No. 3851-0407-000
HAND DELIVERED

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Allan McCarty and Stephen Titus
Application No.: 60/066,589 Group: N/A
Filed: November 23, 1997 Examiner: N/A
Confirmation No.: Not known
For: Billiard Cue

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Sir:

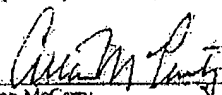
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Kathy Gore and John Seniklose, J.E. Brown and Associates, 775 23rd Street South, Arlington, VA 22202 (Telephone: (703) 979-5350; Facsimile: (703) 979-5388).

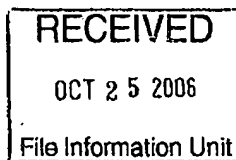
This Power to Inspect and Make Copies will expire on November 19, 2006 or when rescinded, whichever occurs first.

Please do not change the current correspondence address for this application.

Respectfully submitted,


Allan McCarty 10-24-06

Jacksonville, Florida 32207
Dated:



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